

In the Claims

Applicants have submitted a new complete claim set showing marked up claims with insertions indicated by underlining and deletions indicated by strikeouts and/or double bracketing.

Please amend pending claims 25, 26, 38, 39, and 49 as noted below.

1-6. (Cancelled)

7. (Currently Amended) A method for regulating fuel metabolism in a plant, comprising, regulating UCP expression in a plant cell wall or plasma membrane or chloroplast to regulate fuel metabolism of the plant.

8.-24. (Cancelled)

25. (Currently Amended) The method of claim 7, wherein the method involves decreasing the expression or activity of UCP in the plant cell wall or plasma membrane or chloroplast with respect to UCP expression or activity levels prior to decreasing the UCP expression or activity.

26. (Currently Amended) The method of claim 25 wherein the expression or activity of UCP is decreased in the plant cell wall or plasma membrane or chloroplast with respect to UCP expression or activity levels prior to decreasing the UCP expression or activity, by contacting the plant with a UCP inhibitor.

27. (Previously Presented) The method of claim 26, wherein the cell wall UCP inhibitor is a compound selected from the group consisting of UCP binding peptides, anti-UCP antibodies, UCP anti-sense nucleic acids, UCP dominant-negative nucleic acids, nucleotides, nucleotide analogs, tocopherols, and non-omega-3, -6 fatty acids.

28.-37. (Cancelled)

38. (Currently Amended) A method for producing a nutritionally enhanced plant, comprising: decreasing the expression or activity of UCP in the plant cell wall or plasma membrane or chloroplast with respect to UCP expression or activity levels prior to decreasing the UCP expression or activity, to produce a nutritionally enhanced plant.

39. (Currently Amended) The method of claim 38, wherein the expression or activity of UCP is decreased in the plant cell wall or plasma membrane or chloroplast with respect to UCP expression or activity levels prior to decreasing the UCP expression or activity, by contacting the plant with a UCP inhibitor.

40. (Previously Presented) The method of claim 39 wherein the UCP inhibitor is a chloroplast or cell wall UCP antisense sequence.

41. (Original) A plant produced by the method of claim 38.

42.-48. (Cancelled)

49. (Currently Amended) A method for preventing an infection in a plant, comprising: decreasing the expression or activity of UCP in the plant cell wall or plasma membrane or chloroplast with respect to UCP expression or activity levels prior to decreasing the UCP expression or activity, in an amount to prevent infection in the plant.